DC To AC Inverter

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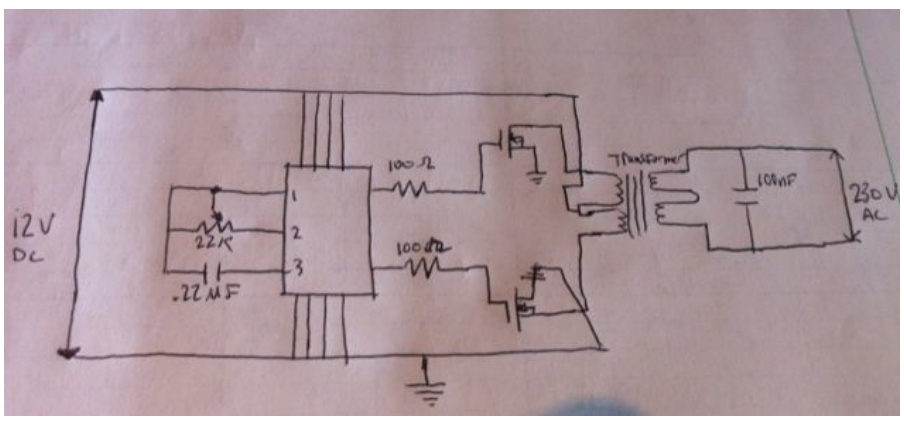
Problem Definition

- Statement: In order to use power from a Solar panel in a house, you have to convert the power from DC to AC.
- Scope: Build a prototype that will show the current is now alternating and not direct.
- Schedule
  - 1-19-13 : Start project
  - 2-30-13 : Parts gathered
  - 3-1-18 : Prototype presentation
  - 6-10-13 : Present finalized project.

Solution Specifications



- Operation Description: use a 6 volt battery to show that we have changed DC to AC.
- Component Specifications:

  6v battery
  Astable Multivibrator (IC CD4047)

Resistors: (100Ω, x 2)
Capacitors: (0.22μF; 0.1μF)
Potentiometer: (100kΩ)
Transformer : Magnetek FP24-250
Solid State Switch: Mosfet IRFZ44

Competitive Analysis

- There is a wide spread market for transformers like the one we are creating. Many people have created transformers like ours for use with solar panels and other DC sources that deliver power to AC loads. With time, we hope to be able to minimize the loss of current and voltage through our transformer. The reason being that we want to generate the max power with the given input voltage.

Potential Applications

The applications for our inverter could be anything that uses AC power. Examples would be businesses, housing, or running an electric engine that uses AC power. As an

Future Improvement Ideas

- In the future we would like to be able to invert high power (over 100Ws). Eventually being able to power all the workings of a house, in a cost effective manner.